

Title (en)

Method and apparatus for sensing a three-dimensional scene.

Title (de)

Verfahren und Vorrichtung zur Abtastung einer drei-dimensionalen Szene.

Title (fr)

Méthode et appareil pour l'exploration d'une scène tri-dimensionnelle.

Publication

EP 0547635 A2 19930623 (EN)

Application

EP 92121638 A 19921218

Priority

US 81061091 A 19911219

Abstract (en)

Three imagers (12a, 12b and 12c) so disposed relative to each other as collectively to form images from all unobstructed objects in a scene plane form images of overlapping object regions that respective images sensors (14a, 14b, and 14c) record and digitize. An imager may, for instance, be a combination of a frustoconical reflector (30a) and an ordinary focusing lens (36a), or it may be a 180 DEG fish-eye lens (50a). After a distortion-removal step (16), reconstruction apparatus (18) uses the relative displacements of the objects in overlapping images to determine their three-dimensional positions. With such an arrangement, a user can take, in a single step, all of the three-dimensional data needed for some applications.
<IMAGE>

IPC 1-7

H04N 13/00

IPC 8 full level

G01B 11/24 (2006.01); **G01B 11/245** (2006.01); **G01C 11/06** (2006.01); **G02B 13/06** (2006.01); **G06F 3/153** (2006.01); **G06T 1/00** (2006.01)

CPC (source: EP)

G01B 11/245 (2013.01); **G01C 11/06** (2013.01); **G02B 13/06** (2013.01)

Cited by

EP0695085A1; CN103206926A; CN102519435A; GB2375251A; GB2375251B; US7355626B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0547635 A2 19930623; **EP 0547635 A3 19930818**; JP H05346950 A 19931227

DOCDB simple family (application)

EP 92121638 A 19921218; JP 33338892 A 19921215